

REMARKS

Claims 1-3, 6-10, 12-13, 15-17, 19-20, 22-24, 27-30, 32-34, 38-42, 44-46, and 48-54 are now pending in the application, of which Claims 8-9, 13, 20, 23, 42, and 48 were previously withdrawn from consideration. Claims 1-3, 6-7, 10, 12, 15-17, 19, 22, 24, 27-30, 32-34, 38-41, 44-46, and 49-54 stand rejected. Claims 4-5, 11, 14, 18, 21, 25-26, 31, 35-37 were previously cancelled, and Claims 1-3, 10, 16, 24, 49-52 and 54 have been amended. Support for the amendments can be found throughout the application, drawings and claims as originally filed and, as such, no new matter has been presented. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

DRAWINGS

On the Office Action Summary, the box for Item 10 regarding the drawings has been checked; however, the accepted/objected status of the drawings was not indicated and there is nothing in the text of the Office Action regarding the drawings. Applicant respectfully requests clarification regarding the drawings.

ELECTION/RESTRICTION

The undersigned acknowledges the Examiner's acceptance of Applicant's election filed on February 24, 2005, and also notes that Claims 8, 9, 13, 20, 23, 42 and 48 have been withdrawn from further consideration by the Examiner as being drawn to a non-elected species.

REJECTION UNDER 35 U.S.C. § 112

Claims 1-3, 6-7, 10, 12, 15-17, 19, 22, 24, 27-30, 32-34, 38-41, 44-46, and 49-54 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point and distinctly claim the subject matter which Applicant regards as the invention. Applicants have amended the claims to overcome these informalities. Applicants submit no new matter was added via these amendments. Therefore, reconsideration and withdrawal of this rejection is respectfully requested.

REJECTION UNDER 35 U.S.C. § 103

Claims 1-3, 6-7, 10, 12, 15-17, 19, 22, 24, 27-30, 32-34, 38-41, 44-46, and 49-54 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hutter (U.S. Pat. No. 5,704,747; hereinafter "Hutter") in view of Peterson (U.S. Pat. No. 5,096,350; hereinafter "Peterson"). This rejection is respectfully traversed.

Initially, Applicants note that Hutter discloses a floating nut element 18 surrounded by a closed dome 20 (see at least column 3, lines 31-35). As illustrated in Figure 1 of Hutter, the dome 20 is not disposed around a substantial portion of the base, as also noted by the Examiner. Hutter further **does not disclose a member defining a first opening on a first surface and a second opening on a second surface** as claimed. Rather, the dome 20 is positioned such that the nut 18 can float within the dome 20. The dome 20 further has a **"radially outwardly extending rim 22 for adhesive mounting** onto [a] blind side of the substrate 12" (emphasis added, see at least Column 3, lines 33-36). Peterson teaches a body 20 having a non-constant thickness disposed against a shim 50 in combination with a cage 30 to restrict a

movement of the body 20 (see at least Col. 3, lines 3-18). The body 20 of Peterson does not have a bore including countersink surface having a cross-section defining a flat surface, rather the bore in the body 20 of Peterson has a curved radius, best shown in Figure 3. The cage 30 of Peterson is secured to the supporting structure by welding. In contrast, Applicants note independent Claims 1 and 2 include a throughbore or bore including a countersink surface, the countersink surface having a cross-section that defines a flat surface, and Claim 3 includes "the base including a countersink surface, the countersink surface having a cross-section that defines a flat surface." Further, Claims 1, 2, and 3 include "the transition portion having a transition minimum thickness greater than" a base minimum thickness (Claim 1) or body minimum thickness (Claim 2), or greater than both the base and body minimum thickness (Claim 3), as well as an integral member disposed around the base and defining "a first opening on a first surface and a second opening on a second surface."

Applicants further note Claims 10 and 16 include the bore including a countersink surface substantially spanning the transition portion with the countersink surface having a cross-section that defines a flat surface. Claims 10, 16, 17 and 24 each include the bore including a countersink surface, and the transition portion having a transition minimum thickness greater than a base and/or body minimum thickness, as well as:

...an integral cage having an upper surface and a lower surface, the integral cage defining an **upper opening on the upper surface, a lower opening on the lower surface**, and two pair of flanges bent to enclose at least a portion of the base...(emphasis added).

Additionally, Claim 24 further includes that the countersink surface is formed at the transition portion, the countersink surface having a cross-section that defines a flat

surface. Claim 24 also includes “the countersink surface having a first outer diameter which is greater than the first diameter.” Claim 49 includes “the base having a base minimum thickness, and the transition portion having a transition minimum thickness greater than the base minimum thickness, said transition portion defining a conical surface, the conical surface having a first outer diameter which is greater than the first diameter, the conical surface having a cross-section that defines a flat surface,” and:

...a member operably allowing some movement of the nut associated therewith but limiting the movement of the nut **by enclosing at least a portion of the base...**(emphasis added).

Additionally, Claim 50 includes “the body having a constant body minimum thickness, and the transition portion having a transition minimum thickness greater than the body minimum thickness, said transition portion defining a conical surface, the conical surface having a cross-section that defines a flat surface,” as well as “a cage **disposed about at least a portion of said base...**” (emphasis added). Applicants further note that Claim 51 includes the “transition portion having a generally conical bore coaxial with the bore of the body, the conical bore having a cross-section that defines a flat surface” and “the minimum thickness of the transition portion [being] greater than the minimum thickness of the base,” and Claim 52 includes “said bore defining a conical surface at the transition portion, the conical surface having a cross-section that defines a flat surface” where “a wall minimum thickness of the transition portion is greater than a minimum thickness of the base and greater than a constant minimum thickness of the body.” In addition, both Claims 51 and 52 include:

...a cage operable **to enclose at least a portion of the base to restrict the motion of the nut**, the cage

defining a first opening on a first surface and a second opening on a second surface (emphasis added).

Claim 53 includes “said threaded bore having a second radius and countersink having a first outer radius smaller than or equal to the first diameter,” and “the base having a constant base minimum thickness...the body having a body minimum thickness, the transition portion having a transition minimum thickness greater than the body minimum thickness and the base minimum thickness,” as well as:

...a means for regulating the movement of the body with respect to the hole by enclosing at least a portion of the base, and defining a **first opening on a first surface and a second opening on a second surface** aligned with the hole (emphasis added).

With regard to the Office's combination of Hutter with Peterson, Applicants respectfully submit that the combination of references cited by the Office does not present a *prima facie* case of obviousness. The establishment of a *prima facie* case of obviousness requires that three basic criteria be met: 1) some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings, 2) that there must be a reasonable expectation of success, and 3) that the prior art reference or references must teach or suggest all the claim limitations. See, e.g., *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Moreover, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on an applicant's disclosure. *Id.*

Concerning the motivation to combine the references, the Office has stated that it would have been obvious to combine Hutter with Peterson to include the retaining means of Peterson as Hutter “does not have any criticality to the dome shaped retaining

means” (Office Action mailed July 28, 2006, p. 4). Applicants note that Hutter expressly states that the dome shaped region or dome 20 is critical to the object of Hutter’s disclosure, that is, to “provide a structure and method for installing a protective liner sleeve **without requiring separate riveted connection**, and in a manner which **permits the nutplate assembly to be adhesively mounted** securely and firmly to the substrate” (emphasis added, see at least Column 1, lines 59-64). This is achieved by the rim 22 that is integrally formed with the dome 20. Thus, to replace the dome 20 of Hutter with the cage nut of Peterson would require the use of rivets or welding to secure the nutplate assembly of Hutter to a substrate. Applicants note that if the cited references seek or warn to avoid the proposed combination of references, it is error to find obviousness based on this combination. Specifically:

It is established that where references, instead of suggesting the invention, **seek or warn to avoid the suggestion**, such references diverge from and teach away from the invention at hand and it is error to find obviousness based on such references.

In re Fine, 837 F.2d 1071, 1074, 5USPQ2d 1596, 1599 (Fed. Cir. 1988) (emphasis added). In this regard, Hutter states it is an object of his invention to have a nutplate assembly that does not require a separate riveted connection to the substrate to enable his nutplate assembly to be adhesively mounted to the substrate. Thus, as Hutter warns against the use of any type of fastening mechanism that requires deformation to the substrate, such as riveting or welding, in direct contrast to the teachings of Peterson, it is improper for the Office to modify Hutter to include a retaining means that requires the use of deformation to secure the retaining means to the substrate when Hutter expressly teaches against it. Furthermore, Applicants note that

Hutter states that attempts have been made to secure nutplate assemblies that include a floating nut to a substrate with adhesive, however, these are undesirable as they “require the nutplate to be pressed against the substrate with a positive force during curing of the adhesive material” (see at least Col. 1, lines 19-30). Thus, as Hutter teaches away from the retaining means of Peterson, Applicants submit that one skilled in the art would not be motivated to combine the Hutter reference with the Peterson reference.

In addition, the Office states that it would be obvious to modify Hutter with the teachings of Peterson as welding the cage nut “would have been recognized as a substitute for the adhesive of Hutter” (Office Action mailed July 28, 2006, p. 4). Applicants note, however, if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900,221 USPQ 1125 (Fed. Cir. 1984) MPEP 2143.01. Applying an adhesive to the cage nut of Peterson would require a positive force to hold the cage nut against the substrate, in direct contrast to the intended purpose of the nutplate of Hutter. As the modification of Hutter to include the cage nut of Peterson would render the nutplate assembly of Hutter improper for its intended purpose, one of ordinary skill in the art would not be motivated to combine Hutter with Peterson.

Furthermore, Applicants note that Hutter teaches it is an object of his invention to include “a liner sleeve [that fits] through and protects the opening in the substrate” that can be installed “without requiring a separate riveted connection” (see at least Col. 1, lines 55-60). To modify Hutter to include the cage nut of Peterson would render the

nutplate assembly of Hutter improper for its intended purpose as the cage nut of Peterson would prevent the use of the liner sleeve. As it is an object of Hutter's invention to include a liner sleeve, modifying Hutter to include the cage nut of Peterson would render the nutplate assembly of Hutter improper for its intended purpose, and thus, one of ordinary skill in the art would not be motivated to combine Hutter with Peterson.

Moreover, Hutter expressly discloses that it is an object of his invention to a nutplate assembly that does not require a "separate riveted connection" and "permits the nutplate assembly to be **adhesively mounted** securely and firmly to the substrate" (emphasis added, see at least Column 1, lines 59-64). Applicants note that modifying Hutter to include a cage nut would require the use of welding and/or riveting to secure the cage nut to the substrate, as discussed. In addition, Applicants note that, as discussed, Hutter teaches away from adhesively mounting a cage nut to a substrate due to the required application of a positive force to the cage nut to secure the adhesive. Therefore, it is contrary to the expressed objects of Hutter to modify Hutter to include the teachings of Peterson with regard to a cage nut as Peterson teaches that in order to secure a cage nut to the substrate, mechanical deformation of the substrate is required, and further, Hutter states that it is undesirable to adhesively mount a cage nut to a substrate. Applicants note that the Patent Laws draw a distinction between trade-offs and motivation to combine: trade-offs often concern what is feasible, not what is necessarily desirable, whereas motivation to combine requires the latter. See, e.g., *Winner International Royalty Corp. v. Wang*, 2002 F.3d 1340, 53 USPQ2d 1580 (Fed. Cir.), *cert. denied*, 530 U.S. 1238 (2000). Consequently, the modification that has been

proposed by the Office (i.e., modifying the fastener of Hutter to include a cage nut) is a trade-off rather than the requisite motivation-to-combine, since it concerns what may be feasible rather than what is necessarily desirable.

Additionally, with regard to Claims 10, 16 and 24, Applicants note that neither Hutter nor Peterson disclose a bore including a countersink surface substantially spanning the transition portion, or the spanning the entire transition portion, where the countersink surface has a cross-section that defines a flat surface as claimed. Rather, Hutter discloses a threaded throughbore extending through the transition portion and Peterson discloses the curved radius spanning a mere portion of the transition portion. Accordingly, Applicants further submit neither Hutter nor Peterson teach at least these features of Claims 10, 16 and 24.

Further, with regard to Claim 49, Applicants respectfully assert that neither Hutter nor Peterson disclose a countersink surface having a first outer diameter which is greater than a first diameter of the body of the nut, in which the countersink surface has a cross-section that defines a flat surface. Rather, with regard to Hutter, as shown in Figures 1 and 7, the diameter of the countersink is smaller than the diameter of the floating nut element 18. With reference to Figure 3 of Peterson, the diameter of the curved radius is smaller than a diameter of the body 20. Accordingly, Applicants further submit neither Hutter nor Peterson teach at least these features of Claim 49.

In view of the above, Applicants submit that the combination cited by the Office does not present a *prima facie* case of obviousness as there is no motivation or suggestion to make the Office's modification, and as such, Applicants respectfully

request that the Examiner reconsider and withdraw the rejection of Claims 1, 2, 3, 10, 16, 17, 24, 49, 51, 52, 53 and 54 under 35 U.S.C. §103(a).

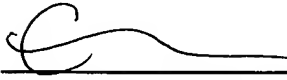
With regard to Claims 6, 7, 12, 15, 19, 22, 27-30, and 32-34, Applicants note these claims depend directly or indirectly from either independent Claims 1, 2, 3, 10, 16, 17, or 24 and, thus, should be in condition for allowance for the reasons set forth for Claims 1, 2, 3, 10, 16, 17, or 24 above. Accordingly, Applicants respectfully requests the Examiner reconsider and withdraw the rejections of Claims 6, 7, 12, 15, 19, 22, 27-30, and 32-34 under 35 U.S.C. § 103(a).

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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